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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,494	02/10/2004	Cheol-hong An	Q77657	8908
23373 7590 01/14/2008 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER YUEN, KAN	
			ART UNIT 2616	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/774,494

Applicant(s)

AN, CHEOL-HONG

Examiner

Kan Yuen

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.138(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date See Continuation Sheet.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :8/10/2005, 11/05/2004, 5/5/2004.

Detailed Action

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 3, the term "reconfiguration" is vague and indefinite, because the data packet was not configured initially, and therefore reconfiguration is not possible. Similar problem exists in all independent claims.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 8, 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Ngo (Pub No.: 2004/0037257).

In claim 1, Ngo disclosed the method of an adaptation unit (AP/CC see fig. 1) which selectively performs one of a first transmission mode in which a data packet is

transferred without reconfiguration of the transmitted data packet (see paragraph 0028, and 0032, and see fig. 2, and fig. 3). After the AP/CC admits the connection requested by a mobile station, the established connection is set in any transmission mode to fulfill throughput requirements based on the capacity of the network. There are 7 transmission modes, wherein first mode being lowest transmission rate, and seventh mode being the highest transmission rate. The transmitting frame 202 shown in fig. 2 comprises five phrases. One of the phrases: broadcast/control phase determines or indicates of which PHY mode the mobile device should operate on. For example, the AP/CC detects the capacity of the network, and selects mode 7 for transmission between mobile stations. The frame shown in fig. 3 is corresponding to the transmission mode 7, where there is no need for frame modification for the initial transmission mode; a second transmission mode in which the transmitted data packet is transferred after reconfiguration thereof, according to specific information included in a header of the transmitted data packet (see paragraph 0030, 0031, 0032, fig. 4). When the transmission needs to be degraded to PHY mode 5, the AP/CC may need to modify or configure the frame shown in fig. 3 to updated frame shown in fig. 4. Fig. 4 shows the updated frame to have two packets per frame during transmission, where the operating PHY mode is determined or indicated in the broadcast/control phase, where the phase is the header of the frame.

Regarding claim 8, Ngo disclosed the method of transmitting of the data packet including selectively performing one of a first transmission mode in which the data packet is transferred without reconfiguration thereof (see paragraph 0028, and 0032,

and see fig. 2, and fig. 3). After the AP/CC admits the connection requested by a mobile station, the established connection is set in any transmission mode to fulfill throughput requirements based on the capacity of the network. There are 7 transmission modes, wherein first mode being lowest transmission rate, and seventh mode being the highest transmission rate. The transmitting frame 202 shown in fig. 2 comprises five phrases. One of the phrases: broadcast/control phase determines or indicates of which PHY mode the mobile device should operate on. For example, the AP/CC detects the capacity of the network, and selects mode 7 for transmission between mobile stations. The frame shown in fig. 3 is corresponding to the transmission mode 7, where there is no need for frame modification for the initial transmission mode; and a second transmission mode in which the data packet is transferred after reconfiguration thereof, according to specific information included in a header of the data packet (see paragraph 0030, 0031, 0032, fig. 4). When the transmission needs to be degraded to PHY mode 5, the AP/CC may need to modify or configure the frame shown in fig. 3 to updated frame shown in fig. 4. Fig. 4 shows the updated frame to have two packets per frame during transmission, where the operating PHY mode is determined or indicated in the broadcast/control phase, where the phase is the header of the frame.

Regarding claim 19, Ngo disclosed the method of an adaptation unit (AP/CC see fig. 1) which selectively performs one of a first receiving mode in which a data packet is received without restoration (see paragraph 0028, and 0032, and see fig. 2, and fig. 3). After the AP/CC admits the connection requested by a mobile station, the established connection is set in any transmission mode to fulfill throughput requirements based on

the capacity of the network. There are 7 transmission modes, wherein first mode being lowest transmission rate, and seventh mode being the highest transmission rate. The transmitting frame 202 shown in fig. 2 comprises five phrases. One of the phrases: broadcast/control phase determines or indicates of which PHY mode the mobile device should operate on. For example, the AP/CC detects the capacity of the network, and selects mode 7 for transmission between mobile stations. The frame shown in fig. 3 is corresponding to the transmission mode 7, where there is no need for frame modification for the initial transmission mode; and a second receiving mode in which the received data packet is restored to a data packet state before being subjected to reconfiguration, according to whether the data packet is reconfigured based on specific information included in a header of the data packet (see paragraph 0030, 0031, 0032, fig. 4). When the transmission needs to be degraded to PHY mode 5, the AP/CC may need to modify or configure the frame shown in fig. 3 to updated frame shown in fig. 4. Fig. 4 shows the updated frame to have two packets per frame during transmission, where the operating PHY mode is determined or indicated in the broadcast/control phase, where the phase is the header of the frame. Then, PHY mode 5 can be restored back to PHY mode 7 based on the capacity of the network.

Claim Rejections - 35 USC § 103

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 9, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ngo (Pub No.: 2004/0037257), In view of You et al. (Pat No.: 7079516).

Regarding claims 2, 9 Ngo disclosed the method of the adaptation unit selectively performs one of a first receiving mode in which a received data packet is not restored when the received data packet is transferred in the first transmission mode (Ngo see paragraph 0028, and 0032, and see fig. 2, and fig. 3). The received MAC framed is not restored. However, Ngo did not disclose the method of a second receiving mode in which the received data packet is restored to a data packet state before being subjected to the reconfiguration, when the received data packet is transferred in the second transmission mode. You et al. from the same or similar fields of endeavor teaches the method of a second receiving mode in which the received data packet is

restored to a data packet state before being subjected to the reconfiguration, when the received data packet is transferred in the second transmission mode (see column 3, lines 1-27). The packet handler 21 for restoring packet data from output signals of the GFSK demodulator 20. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by You et al. in the network of Ngo. The motivation for using the method as taught by You et al. in the network of Ngo being that it increase system accuracy.

Regarding claim 26, Ngo disclosed the method of selectively reconfiguring the data packet according to specific information included in a header of the data packet, before transmitting the data packet (see paragraph 0030, 0031, 0032, fig. 4). When the transmission needs to be degraded to PHY mode 5, the AP/CC may need to modify or configure the frame shown in fig. 3 to updated frame shown in fig. 4. Fig. 4 shows the updated frame to have two packets per frame during transmission, where the operating PHY mode is determined or indicated in the broadcast/control phase, where the phase is the header of the frame. Then, PHY mode 5 can be restored back to PHY mode 7 based on the capacity of the network. However, Ngo did not disclose the method of restoring the data packet to a data packet state before being subjected to the reconfiguration, if the received data packet has been reconfigured. You et al. from the same or similar fields of endeavor teaches the method of restoring the data packet to a data packet state before being subjected to the reconfiguration, if the received data packet has been reconfigured (You et al. see column 3, lines 1-27). The packet handler 21 for restoring packet data from output signals of the GFSK demodulator 20.

8. Claims 3-7, 10-14, 18, 20, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ngo (Pub No.: 2004/0037257), In view of LoGalbo et al. (Pub No.: 2002/0093928).

For claims 3, 10 Ngo did not disclose the method of in the second transmission mode, the adaptation unit removes header information of the transmitted data packet to create new packet information and adds additional data thereto. LoGalbo et al. from the same or similar fields of endeavor teaches the method of in the second transmission mode, the adaptation unit removes header information of the transmitted data packet to create new packet information and adds additional data thereto (see paragraph 0058). The MAC header and Link layer header can be changed or removed, and additional information fields can be added. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by LoGalbo et al. in the network of Ngo. The motivation for using the method as taught by LoGalbo et al. in the network of Ngo being that it increase system accuracy.

Regarding claims 4, 11 LoGalbo et al. disclosed the method of the new packet information comprises a destination service access point (DSAP), a total length of IP(Internet Protocol), a number of IP headers, UDP(User Datagram Protocol) checksums, and a number of UDP checksums (see paragraph 0058). Although the additional information fields may not include a destination service access point (DSAP),

a total length of IP(Internet Protocol), a number of IP headers, UDP(User Datagram Protocol) checksums, and a number of UDP checksums, however its well known in the art for a person of ordinary skill to implement all the fields of information in a packet.

Regarding claims 5, 12 LoGalbo et al. disclosed the method of the new packet information comprises four bits of the number of UDP checksums, two bytes of the total length of IP, and two bytes of the UDP checksums (see paragraph 0058). Although the additional information fields may not include the claimed limitation, however its well known in the values of bits are well known in the art, and it can be manipulated by a person of ordinary skill in the art.

Regarding claim 6, LoGalbo et al. disclosed the method of the transmitted data packet comprises an IP packet (see paragraph 0003).

Regarding claim 7, LoGalbo et al. disclosed the method of the specific information comprises a field of Type of Service included in the header of the transmitted data packet (see paragraph 0037).

Regarding claim 13, LoGalbo et al. disclosed the method of the data packet comprises an IP packet (see paragraph 0003).

Regarding claim 14, LoGalbo et al. disclosed the method of the specific information comprises a field of Type of Service included in the header of the data packet (see paragraph 0037).

Regarding claim 18, LoGalbo et al. disclosed the method of the new packet information comprises six bytes (see paragraph 0058). Although the packet may not

include the claimed limitation, however its well known in the values of bytes are well known in the art, and it can be manipulated by a person of ordinary skill in the art.

Regarding claim 20, Ngo disclosed the method of the reconfiguration of the data packet comprises removing header information of the data packet to create new packet information and adding additional data thereto (see paragraph 0058). The MAC header and Link layer header can be changed or removed, and additional information fields can be added.

Regarding claim 21, Ngo disclosed the method of an adaptation unit (AP/CC see fig. 1) which selectively performs one of a first receiving mode in which a data packet is received without restoration (see paragraph 0028, and 0032, and see fig. 2, and fig. 3). After the AP/CC admits the connection requested by a mobile station, the established connection is set in any transmission mode to fulfill throughput requirements based on the capacity of the network. There are 7 transmission modes, wherein first mode being lowest transmission rate, and seventh mode being the highest transmission rate. The transmitting frame 202 shown in fig. 2 comprises five phrases. One of the phrases: broadcast/control phase determines or indicates of which PHY mode the mobile device should operate on. For example, the AP/CC detects the capacity of the network, and selects mode 7 for transmission between mobile stations. The frame shown in fig. 3 is corresponding to the transmission mode 7, where there is no need for frame modification for the initial transmission mode; and a second receiving mode in which the received data packet is restored to a data packet state before being subjected to reconfiguration, according to whether the data packet is reconfigured based on specific

information included in a header of the data packet (see paragraph 0030, 0031, 0032, fig. 4). When the transmission needs to be degraded to PHY mode 5, the AP/CC may need to modify or configure the frame shown in fig. 3 to updated frame shown in fig. 4. Fig. 4 shows the updated frame to have two packets per frame during transmission, where the operating PHY mode is determined or indicated in the broadcast/control phase, where the phase is the header of the frame. Then, PHY mode 5 can be restored back to PHY mode 7 based on the capacity of the network. However, the reference does not teach reconfigures the data packet by removing header information of the data packet to create new packet information and adding additional data thereto (LoGalbo et al. see paragraph 0058). The MAC header and Link layer header can be changed or removed, and additional information can be added. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by LoGalbo et al. in the network of Ngo. The motivation for using the method as taught by LoGalbo et al. in the network of Ngo being that it increase system accuracy.

9. Claims 15, 16, 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ngo (Pub No.: 2004/0037257), In view of You et al. (Pat No.: 7079516), as applied to claim 16 above, and further in view of loGalbo et al. (Pub No.: 2002/0093928).

Regarding claim 15, Ngo and You et al. did not disclose the method of in the second transmission mode, the adaptation unit removes header information of the transmitted data packet to create new packet information and adds additional data

thereto. LoGalbo et al. disclosed the method of in the second transmission mode, the adaptation unit removes header information of the transmitted data packet to create new packet information and adds additional data thereto (see paragraph 0058). The MAC header and Link layer header can be changed or removed, and additional information fields can be added. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by LoGalbo et al. in the network of Ngo and Youet al. The motivation for using the method as taught by LoGalbo et al. in the network of Ngo and Youet al. being that it increase system speed.

Regarding claim 16, You et al. disclosed the method of in the second receiving mode, the adaptation unit restores data included in the received data packet to respective data packets before being subjected to reconfiguration (see column 3, lines 1-27). The packet handler 21 for restoring packet data from output signals of the GFSK demodulator 20.

Regarding claim 27, LoGalbo et al. disclosed the method of the reconfiguration of the data packet comprises removing header information of the data packet to create new packet information and adding additional data thereto (see paragraph 0058). The MAC header and Link layer header can be changed or removed, and additional information can be added.

Regarding claim 28, You et al. disclosed the method of the restoring of the data packet comprises restoring data included in the received data packet to respective data packets before being subjected to reconfiguration (see column 3, lines 1-27). The

packet handler 21 for restoring packet data from output signals of the GFSK demodulator 20.

Regarding claim 29, Ngo disclosed the method of the restoring of the data packet further comprises combining data of the respective data packets with corresponding header information (see paragraph 0030, 0031, 0032, fig. 4). The PHY mode 5 can be restored back to PHY mode 7 based on determination indicated in the broadcast/control phase or the header.

10. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ngo (Pub No.: 2004/0037257), In view of You et al. (Pat No.: 7079516), and loGalbo et al. (Pub No.: 2002/0093928), as applied to claim 16 above, and further in view of Biacs et al. (Pub No.: 2003/0210656).

For claim 17, Ngo and You et al. did not disclose the method of wherein in the second receiving mode, the adaptation unit combines the data of the respective data packets with corresponding header information. Biacs et al. from the same or similar fields of endeavor teaches the method of in the second receiving mode, the adaptation unit combines the data of the respective data packets with corresponding header information (see paragraph 0068). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Biacs et al. in the network of Ngo, loGalbo et al. and You et al. The motivation for using the method as taught by Biacs et al. in the network of Ngo, loGalbo et al. and You et al. being that it increase system accuracy.

11. Claims 22, 23, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ngo (Pub No.: 2004/0037257), In view of LoGalbo et al. (Pub No.: 2002/0093928), as applied to claim 21 above, and further in view of You et al. (Pat No.: 7079516).

For claim 22, Ngo and LoGalbo et al. did not disclose the method of in response to the data packet received thereto being the reconfigured data packet, said at least one of the transferring unit and the receiving unit restores the reconfigured data packet to an original data packet format. You et al. from the same or similar fields of endeavor teaches the method of in response to the data packet received thereto being the reconfigured data packet, said at least one of the transferring unit and the receiving unit restores the reconfigured data packet to an original data packet format (see column 3, lines 1-27). The packet handler 21 for restoring packet data from output signals of the GFSK demodulator 20. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by You et al. in the network of Ngo and LoGalbo et al. The motivation for using the method as taught by You et al. in the network of Ngo and LoGalbo et al. being that it increase system speed.

Regarding claim 23, LoGalbo et al. disclosed the method of the new packet information includes a destination service access point (DSAP), a total length of IP, a number of IP headers, user datagram protocol (UDP) checksums, and a number of UDP checksums (see paragraph 0058). Although the additional information fields may

not include the claimed limitation, however its well known in the values of bits are well known in the art, and it can be manipulated by a person of ordinary skill in the art.

Regarding claim 25, You et al. disclosed the method of at least one of the data transferring unit and the receiving unit comprises an adaptation layer which selectively reconfigures the data packet to increase a transmission efficiency and restores the reconfigured data packet to an original data packet format (see column 3, lines 1-27). The packet handler 21 for restoring packet data from output signals of the GFSK demodulator 20.

12. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ngo (Pub No.: 2004/0037257), In view of LoGalbo et al. (Pub No.: 2002/0093928), as applied to claim 21 above, and further in view of Ishibashi (Pat No.: 6778537).

For claim 24, Ngo, LoGalbo et al. did not disclose the method of the data packet comprises audio/video (A/V) streaming data. Ishibashi from the same or similar fields of endeavor teaches the method of the data packet comprises audio/video (A/V) streaming data (see column 1, lines 17-30). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Ishibashi in the network of Ngo and LoGalbo et al. The motivation for using the method as taught by Ishibashi in the network of Ngo and LoGalbo et al. being that it increase system speed.

Conclusion


13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lioy et al. (Pat No.: 6424639), are show systems which considered pertinent to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kan Yuen whose telephone number is 571-270-1413. The examiner can normally be reached on Monday-Friday 10:00a.m-3:00p.m EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky O. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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SUPERVISORY PATENT EXAMINER

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